



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

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SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
06/555,426	11/23/86	NILSSEN	G

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EXAMINER	
BEHAW	
ART UNIT	PAPER NUMBER
212	27

DATE MAILED: 02/19/87

This is a communication from the examiner in charge of your application.

COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☐ Responsive to communication filed on _____ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), _____ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice re Patent Drawing, PTO-948. |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449 | 4. <input type="checkbox"/> Notice of informal Patent Application, Form PTO-152 |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474 | 6. <input type="checkbox"/> _____ |

Part II SUMMARY OF ACTION

1. ☒ Claims 116-123 are pending in the application.
Of the above, claims _____ are withdrawn from consideration.
2. ☐ Claims _____ have been cancelled.
3. ☐ Claims _____ are allowed.
4. ☒ Claims 116-123 are rejected.
5. ☐ Claims _____ are objected to.
6. ☐ Claims _____ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings which are acceptable for examination purposes until such time as allowable subject matter is indicated.
8. ☐ Allowable subject matter having been indicated, formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on _____. These drawings are ☐ acceptable; ☐ not acceptable (see explanation).
10. ☐ The ☐ proposed drawing correction and/or the ☐ proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed _____, has been ☐ approved. ☐ disapproved (see explanation). However, the Patent and Trademark Office no longer makes drawing changes. It is now applicant's responsibility to ensure that the drawings are corrected. Corrections MUST be effected in accordance with the instructions set forth on the attached letter "INFORMATION ON HOW TO EFFECT DRAWING CHANGES", PTO-1474.
12. ☐ Acknowledgment is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received
☐ been filed in parent application, serial no. _____; filed on _____.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claims 116 to 123 appear in the case.

Claim 119 is rejected under 35 U.S.C. 112, first paragraph, as the disclosure is enabling only for claims limited in accordance with the disclosure at pages 5-16 of the specification. See MPEP 706.03(n) and 706.03(z). The last three lines of claim 119 find no response in figure 2 of the disclosure. As to the claimed function of the last three lines in the claim, this appears to be found in capacitor 68 of figure 2. See the specification, page 9, bottom incomplete paragraph. But this connection is not as claimed; capacitor 68 is in parallel with transistor 43.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless

- (a) the invention was known or used
by others in this country, or
patented or described in a printed
publication in this or a foreign
country, before the invention thereof
by the applicant for a patent.
- (b) the invention was patented or

described in a printed publication
in this or a foreign country or in
public use or on sale in this
country, more than one year prior to
the date of application for patent
in the United States.

Claims 120 and 121 are rejected under 35 U.S.C.
102(a) as being clearly anticipated by Rhoads. Note
that load means T2, R4, C3 of Rhoads are connected from
center-tap A with the bottom AC input line through
connect means 36, S1 and 34 (fig. 2A).

Claims 116, 118, and 122 are rejected under 35
U.S.C. 102(a) as being anticipated by Rhoads.

Although it is not described as such, Rhoads
circuit (fig. 2A) includes a series connected inductor
(primary of T2) and capacitor (C3) connected as
claimed, having an inherently lower frequency than the
fundamental frequency of the inverter output. The load
and the means to connect the load "read on" resistor R4
and its connection to C3.

Claim 123 is rejected under 35 U.S.C. 102(b) as
being anticipated by Grunwaldt.

The claim finds full response in figure 2 of the
reference showing LC circuit 6, 7, lamp 8 connected in
parallel circuit with capacitor 7, and a transformer 5
operating the inverter "at a frequency that is not
higher than the natural resonant frequency of the
series combination of said inductor and capacitor"

(claim 123, last three lines). Indeed, the inverter operates at the resonant frequency of LC circuit 6,7 through feedback transformer 5.

Claims 117 and 119 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. The function attributed to the last three lines of each claim appears to be misdescriptive; the stated function of the capacitors is to "restrain[s] the rate of voltage change across the collector and emitter terminals of transistor 42" (claim 117) or to "restrain[s] the rate of voltage ^{rise} ~~use~~ on the collectors [of transistors 91, 92]," (claim 119; spec. pages 9 and 16). Thus the claimed and stated functions are in conflict.

The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to

which said subject matter pertains.

Patentability shall not be negatived by

the manner in which the invention was

made.

Claim 117 is rejected under 35 U.S.C. 103 as being unpatentable over Rhoads in view of the Swiss reference. Except for the claimed capacitor across the IC circuit (interpreted to be a cross a collector emitter path of a switching transistor), the claim is anticipated by Rhoads. But the Swiss reference shows this provision to be old (see C1, C2 and the Abstract). To so provide Rhoad's inverter would have improved it.

Claim 116 is rejected under 35 U.S.C. 103 as being unpatentable over Official Notice. Official Notice is taken that a series resonant inductor and capacitor connected across the output terminals of an inverter is old. To operate the inverter frequency at less than the resonant frequency, more than the resonant frequency or in phase with the resonant frequency, in and of itself, produces no unexpected results, and to place a load, such as an oscilloscope, across the capacitor would similarly not produce patentable invention. In essence, this is all that is claimed, and it is well settled that expected results are evidence of obviousness.

As to the last paragraph of applicant's Remarks, submitted November 23, 1983, reference is made to the

parent case for an indication of allowable subject matter.

The claims in this case are drawn to more than one distinct invention or inventive concept. Compare, for example, the concepts of claims 116, 122 and 123, with the concepts of claim 117 and 119, or claims 129 and 121, or claim 118. All claims have been examined in the interest of cost effectiveness to both applicant and the Office. Should applicant unduely multiply, combine or permutate these concepts by submitting an undue number of additional claims drawn to each concept, the examiner reserves his right to make a restriction requirement in response to such amendment and force applicant to choose just one inventive concept for further prosecution.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Figure 5 of Walden shows a half-bridge inverter using a resonant LC circuit across the center top of DC source 50, 52 and the midpoint of transistor 42, 44. Pitel shows a resonant circuit (55, 57, 59) at an inverter output.

Any inquiry concerning this communication should be directed to William H. Beha, Jr. at telephone number 703-557-5050.

Beha/lg

703-557-5050

2/27/84

William H. Beha, Jr.